

ASMB Newsletter



OFFICERS

President:

Renato Iozzo (2008)

Vice Pres/President Elect

William Parks (2008)

Past President:

Linda Sandell

Secretary/Treasurer

(To be selected)

Council Members

Sherri Adams (2008)

Suneel Apte (2007)

Scott Argraves (2007)

Elaine Davis (2007)

Jeffrey Esko (2009)

Mark Ginsberg (2008)

Josephine Grima (2009)

Veronique Lefebvre (2009)

Charles Little (2007)

Karen Lyons (2009)

Allen Rapraeger (2008)

Bryan Toole (2009)

Tom Wight (2008)

Anne Woods (2007)

Kenneth Yamada (2009)

Marian Young (2008)

President's Letter

Dear fellow Matrix Biologists,

First, I wish to thank the outgoing President Linda Sandell who has done a tremendous job during the past two years. The strategic plan she developed last year together with various council members is alive and active, and will contribute to make ASMB a vibrant and interactive society worldwide.

Next, I would like to congratulate Bill Parks from the University of Washington as the new Vice-President elect of the ASMB. Bill has done a great job during the past several years as secretary/treasurer and he will continue in this capacity until we find a suitable replacement for this key job.

I am glad to report to you that the ASMB is strong, financially stable, and moving forward. The national meeting in Nashville was outstanding, both in terms of the organization (thank you Jeff Davidson, Roy Zent, Bill Hudson, Nanette Bahlinger and several members of Vanderbilt University) and the quality of the talks, posters and SIGs. At the meeting, the society recognized two individuals for their meritorious contributions to the field of matrix biology: Bjorn Olsen from Harvard University and David Calderwood from Yale University received the senior and junior scientist research award, respectively (see below). We plan to continue this tradition for the 2008 San Diego National Meeting. Numerous travel awards were also distributed to best presentations/posters as well as monetary prizes at the gala in the Grand Ole Opry. I also received an award, runner up for the best-dressed (cowboy style): a \$5 ticket for a drink. By the time I went to the bar, the ticket was not valid!

In the next two years, I see several issues on the table that need to be addressed and, with your help, all the tasks will be accomplished to improve the ASMB standing.

❖ First and foremost, we need to keep in touch on a regular basis. This will be achieved with a newsletter edited by Marian Young and Veronique Lefebvre which we plan to send to all of you on a quarterly basis. The success of any newsletter is that we need the "news" and, thus, I encourage you fellow matrix biologists to send in your thoughts, comments, job advertisements, articles in press, meeting announcements and color pictures (there will not be any charge for color images) of ASMB members activities. We need to keep our momentum going following the big success of the Nashville meeting.

❖ The second task is to increase the national visibility of the ASMB. This task will be facilitated by our Executive Director, who is located in the FASEB office of Bethesda, MD (see below). She will work on a regular basis for the Society and will be instrumental in all the major activities and initiatives of the Society.

❖ The third task is to improve our visibility and participation in NIH study sections. It has been my experience and that of several members of the society that the newly-established NIH study sections are not working well. Often, the panel lacks expertise in matrix biology and by dismantling established study sections, such as Pathobiochemistry and other study sections, NIH has created a "vacuum" of expertise that is generating a serious damage to the field. I do not believe that the loss of funding by matrix biologists is solely due to budget constraints. I would rather put forward the hypothesis that the problem lies with the lack of specialized study sections that are capable of properly evaluating research proposals from matrix biologists. The NIH is fully aware of the problem with study section reorganization and has initiated several open house meetings in Bethesda starting in March 2007. Our society has been invited to participate and Checco Ramirez will participate as our representative at the first meeting. Subsequently, I and other members of the Society will participate on a



Renato Iozzo

regular basis. I will provide you with updates in the future newsletters.

❖ An ongoing negotiation is occurring between ASMB and Elsevier, the publisher of Matrix Biology. At the last council meeting in Nashville it was agreed that we will be willing to affiliate ASMB with the Matrix Biology Journal. There are several advantages for this affiliation. Elsevier will sponsor lectureships and provide funds for travel awards. In addition, Elsevier will provide free pages of advertisement and discount for publishing the abstracts of the ASMB meeting. I will provide you with updates in the future newsletters.

Let me thank all of you and the Society for providing me with the opportunity to serve as President for the next two years. It is a true privilege. I wish you a very happy and successful year.

Renato Iozzo, President ASMB

Past-President's report

Dear Colleagues:

It has been a great pleasure to serve as the President of the ASMB for the last two years. The highlight was our National Meeting in Nashville with over 400 attendees! The team at Vanderbilt, Billy Hudson, Jeff Davidson and Roy Zent with organizational help from Nanette Bahlinger, made the meeting a great success. One of our goals was to increase our external funding for the meeting. Our fund raising efforts for this meeting met our goal of over \$100,000 and we had 16 exhibitors - we expect to see all return to our meeting in San Diego. For the first time, we have a Business Meeting at which awards were made and finances, membership and the Matrix Biology Journal were discussed. The amount of planning that goes into these national meetings is enormous and the organizers deserve great respect and huge applause for a job well done!!!

Our goals over the last two years were to help stabilize the society, establishing more professional procedures, increasing membership and fundraising. These years have presented some challenges and some great rewards for the Society, but we have had great success. As we are a young Society, one of the goals of the past two years was to establish a plan for future directions and growth. We have undergone a strategic planning process and established some goals for the next few years. While there is still a great deal of work to be done, we have made great strides forward in identifying our challenges, strengths, weaknesses and opportunities. From this analysis, we developed some immediate plans and a direction for the future.

The most important goal of the last two years was to stabilize the Society for future growth. Importantly, we have hired an Executive Director who brings significant professional management ideas to the ASMB. The Executive Director has spent 25% of her time with us since February 2006, and this time commitment will increase in the coming year. We also established a new Website Committee, set membership goals and modified the By-laws to comply with the reality of the organization.

Thanks so much to the past-Presidents who have been so helpful, Bob Mecham helped with the newsletter, Checco Ramirez was in charge of the nominations, and Paul Bornstein provided invaluable advice and guidance. I would like to thank the members of the Executive Committee, Bill Parks, Treasurer, and Renato Iozzo, Vice President. Finally, the business of the ASMB would not have been possible without the generous and expert help of Hatice Goshtaiy and Jean Smith in my office.

We would love to have more member involvement, so please send your ideas and offers to help to the new President Renato Iozzo or to the administrative office at asmb@faseb.org.

Warmest Regards to All,

Linda Sandell

ASMB Business Meeting 2006

The agenda of the business meeting covered the State of the Society. We thanked the organizers of the 2006 Annual Meeting in Nashville that was an overwhelming success. A report on the Council was made announcing that over the last two years our Council has met twice at day-and-a-half retreats to study the state of the society and plan for the future. We have instituted active committees including a Website committee chaired by

New Vice President/President-elect Selected

William C. Parks received his Ph.D. from the Medical College of Wisconsin in 1982 and did his postdoctoral training in extracellular matrix biology with Dr. Robert Mecham at Washington University School of Medicine in



St. Louis. In 1986, Bill joined the faculty at Washington University, eventually becoming Professor of Pediatrics, Medicine, and Cell Biology and Physiology and Director of the Center for Developmental Lung Biology. In 2004, he relocated to the University of Washington in Seattle, where he is Director of the Center for Lung Biology and Professor of Medicine. His research

focuses on the function of matrix metalloproteinase in immunity and repair and on the molecular regulation of elastin production during development and disease. Bill has organized several meetings, including the Gordon Research Conference on Elastin and Elastic Tissues (1997), the Gordon Research Conference on Tissue Repair and Regeneration (2003), and, with Linda Sandell and Bob Mecham, the International Conference on the Biology and Pathology of the Extracellular Matrix (2000). Bill has served on several advisory committees, including the NIH Pathobiology Study Section and many for the American Thoracic Society, and he currently chairs the Cell Structure and Metastasis Committee for the American Cancer Society.

Bill has been heavily involved with the American Society for Matrix Biology since its inception. In 2001, when ASMB was started by Paul Bornstein and others, Bill was elected as the Secretary/Treasurer, a position he has held to this day. Thus, Bill has been continually involved in ASMB leadership and growth, giving him the experience and history to help build the society even further.

Scott Argraves, a Membership committee chaired by Elaine Davis, a Newsletter committee chaired by Marian Young and a Publications committee chaired by Suneel Apte. These committees will work actively over the next year.

For Bill Parks, the Secretary/Treasurer, we presented the Society's Finances. We have about \$60,000 in the bank, the Nashville meeting will cost about \$250,000. We hope to add about \$20,000 from the Nashville meeting. We have almost enough members now to be able to cover our yearly finances. Our budget consists of Council meetings (very little as the Councilors pay their own way to meetings) and we can now afford a 25% Executive Director.

Vote on By-laws changes. We voted on three by-laws changes that had been presented to the membership via email 30 days before the meeting. They were: (1) Presidential and Vice-Presidential terms increased from 1 year to 2 years. (2) Council term from 3 years to 4 years and (3) to allow for electronic voting

Bjorn Olsen gave a report on the state of the Journal, Matrix Biology. The impact factor has increased significantly over the last 3-4 years. In a related matter, the ASMB is currently under negotiation to become an Affiliated Society with the Journal.

The Senior Scientific Award and Junior Scientific Awards, both sponsored by Genzyme, were presented to Bjorn Olsen and David Calderwood, respectively. Fifteen Travel Awards were announced. Renato Iozzo presented Linda with a present from the ASMB and thanked her for being a President of the Society.

In summary, the state of our society is excellent. We are alive and well and it looks like it will thrive -- at least through childhood: Membership is growing (40% per meeting year since 2001), the Council is active and an Executive Director is on board to move things forward more rapidly.

But we have teenage years coming soon...

Young investigators win travel awards

Fifteen young investigators were selected by a panel of ASMB judges for travel awards. Selections were based on the quality of the posters submitted and presented. The award winners for the Nashville ASMB meeting were:

- Shanna Arnold, University of Texas Southwestern Medical Center, TX
"SPARC regulates vascular function in orthotopic pancreatic tumors"
- Simone Barbero, University of California, San Diego, CA
"Caspase 8 regulates integrin-mediated adhesion and migration"
- Leontine Galante, Princeton University, NJ
"A role for DTDST and syndecan-2 fibronectin matrix assembly"
- Robert Hinton, Cincinnati Children's Hospital, OH
"Matrix organization in developing and diseased aortic valves"
- Vera Hintze, Thomas Jefferson University, PA
"Intracellular accumulation of mutant collagen leads to apoptosis"
- Thomas Lozito, NIAMS, National Institutes of Health, MD
"Endothelial cell matrix influences MSC stem cell differentiation"
- Audrey McAlinden, Washington University School of Medicine, MO
"Nuclear Protein TIA-1 regulates alternative splicing of COL2A1"
- Tom Merritt, University of Washington, WA
"Type XXVII collagen is made by mature hypertrophic chondrocytes"
- Tamara Pozos, Children's Hospital, Seattle, WA
"Innate immunity to tuberculosis in zebrafish; roles of MMPs"
- Katy Rodgers, University of Pennsylvania, PA
"Reduced perlecan results in skeletal dysplasia: A new mouse model"
- Valerie Schneider, University of Pennsylvania, PA
"LH3 and type XVIII collagen are critical for motor axon migration"
- Adrian Shifren, Washington University School of Medicine, MO
"Elastin deficiency alters lung response to injury and repair"
- Millicent Sullivan, University of Delaware, DE
"Hevin regulates decorin production and collagen fibrillogenesis"
- Elizabeth Sweeney, University of Pennsylvania, PA
"Altered matrix in collagen X mice leads to hematopoietic defects"
- Alencia Woodard-Grice, University of Alabama, AL
"Hyposialylation of beta 1 integrins activates alpha 4 beta 1 receptors"

ASMB's Executive Director

Ann Link, who has a 15-year career with scientific associations, has been serving as executive director since February 2006 through FASEB's Managed Society Services. She finds it remarkable that a society with 450 members had a nearly equal number of attendees at its annual meeting, and she is impressed with the amount of money the society raised for their gathering in Nashville. "ASMB has the right combination of leadership and member enthusiasm to be highly successful. The society also covers a very exciting scientific area," she said.

Newsletter Committee solicits input from members

The Co-Editors of the ASMB Newsletter want to identify items of information you, as a society, would like included in the newsletter. If you have any suggestions please forward them to: Marian Young (myoung@dir.nidcr.nih.gov) or Veronique Lefebvre. (LEFBVV@ccf.org).



Marian Young

Senior and Junior Investigators Honored

Two awards were given to an outstanding senior and junior member of ASMB at the Nashville meeting. Nominations were solicited from the membership and evaluated by the council. The Senior investigator award winner for 2006 was a Bjorn Olsen, MD, PhD from Harvard Medical and Dental School. The junior investigator award winner was David Calderwood PhD from Yale University. Congratulations to them both for this prestigious honor.



Bjorn Olsen



David Calderwood

ASMB is highlighted for its web site

The ASMB web site was recently chosen by Thomson Scientific to be included in Current Web Contents™ (<http://scientific.thomson.com/products/cwc/fac>). Thomson Scientific is best known by scientists for research tools such as ISI Web of Knowledge and Web of Science®. Current Web Contents is their ever-growing collection of high-quality, scholarly web sites. To be included, ASMB's site had to meet high selection standards. Scientific Web

Content Editors then reviewed the site, developed a standardized descriptive record, and created a link from ISI Web of Knowledge to the ASMB site. It is an honor to be included in this prestigious database and we congratulate the ASMB web masters.

Nashville meeting a hit!

The ASMB biology meeting was, by all accounts, a tremendous success. There were 424 registrants almost half of which were post-doctoral fellows and students. The outstanding attendance by young investigators is a healthy sign of the vitality and new energy in our society. The diversity of the society was also noted in the number of international participants. Of the 342 full registrants, 46 were international members coming from 14 different countries while the 296 registrants from the USA came from 33 different states. The growing participation in the biannual meeting is an exciting development for ASMB. We look forward to even more participation in San Diego, CA in 2008.



Greg Bix and Jim San Antonio from Thomas Jefferson University "meet" Elvis.

ASMB will be meeting in San Diego in 2008! Watch for further details as the year progresses

ASMB is a guest society of the American Society for Investigative Pathology. This means you can register for EB2007 at the member rate! EB2007 is April 28 – May 2 in Washington, DC!

Use The ASMB Web

Site www.asmb.net

Website Features

- Information about the organization, including bylaws, officers, membership, etc.
- Announcements--items of interest to matrix biologists
- Information about the ASMB National Meeting
- Employment & Funding Opportunities
- ASMB Newsletter archive
- Directory of members
- Links to members' web sites

ASMB business

- When you log onto the "Members Only" page (login using your email address and password. If you have forgotten your password, contact the ASMB office at asmb@asmb.net), you will immediately see your dues payment status and a listing of your journal subscriptions.
- You can pay your dues and subscribe to journals by selecting the "Membership Dues" button.
- The "Update" and "Search" buttons allow you to review and update your own contact information as well as search our member database.

To post information about a job opening or job wanted, send detailed information to our Administrative Assistant: asmb@asmb.net

Job opportunities and announcements will also be printed in our Society newsletter.

Don't Forget to Renew!

We had a record number of members last year with 450! Your participation in our Society is the most important contribution you can make to helping increase awareness of research and opportunities in extracellular matrix biology.

With the help of your membership dues, in 2006 we added professional management of the society and provided 15 students and postdoctoral fellows with travel awards to our national meeting.

In the coming year, your dues will be at work to improve our web site. Among the improvements will be posting an audio of the Keynote address and the abstracts from the ASMB meeting in Nashville, offering an expanded job board, and making the website compatible with all browsers. We urge you to pay your dues so we can continue to add programs that benefit matrix biology.

The 2007 Annual Dues can be paid any time via the ASMB website: <http://www.asmb.net/>

Alternatively, checks can be sent to the administrative office: ASMB, 9650 Rockville Pike, Bethesda, MD 20814.

Advantages of Membership:

- Membership and recognition in an emerging, important scientific discipline
- A two-year membership rate that is significantly less expensive per year than the one-year rate
- For two-year renewals, a significant discount on the registration fee for the 2008 ASMB National Meeting in San Diego
- Participation in meeting planning and abstract review
- A Newsletter containing information about Society activities

Access to the "Members only" web material where you can search the membership list, the meeting abstracts published in Matrix Biology and other interesting information relating to matrix biology.

With Gratitude:

The ASMB would like to thank Bob Mecham for help with assembling the newsletter in its final form and Jeff Davidson for considering serving as President Elect for the society.

2007 Meetings of Interest to Matrix Biologist

Vascular Matrix Biology and Bioengineering

Mar 15-18, Whistler Village, BC Canada

American Society of Dental Research International Association of Dental Research (AADR/IADR)

Mar 21-24, New Orleans, Louisiana

The Seventh International Conference on Hyaluronan (Hyaluronan 2007)

Sponsored by International Society of Hyaluronan Sciences (www.ishas.org/conference.html)

Apr 22-27, Charleston, SC

Osteogenesis Imperfecta Society

The 16th Biennial National Conference on Osteogenesis Imperfecta

Aug 1-3, 2008 Crystal City, VA

American Society of Bone and Mineral Research (ASBMR)

Sept 16-19, Honolulu, HI

V International Meeting on Proteoglycans

Sept. 16-20, Rio de Janeiro, Brazil

Orthopedic Research Society (ORS)

6th Combined Meeting of the Orthopaedic Research Societies

Oct 20-24, 2007, Honolulu, HI

7th Pan Pacific Connective Tissue Societies

Oct 28-Nov 1, Cairns, Australia

American Heart Association (AHA)

Nov 4-7, Orlando, FL

World conference on Osteoarthritis

Dec 6-9, Miami Beach, FL

2007 Gordon Research Conferences

<http://www.grc.uri.edu/07sched.htm>

Bones and Teeth

July 15-20, University of New England, ME

Cartilage Biology and Pathology

Mar 4-9, Ventura, CA

Cell Contact and Adhesion

May 27-Jun 1, Il Ciocco, Italy

Collagen

July 22-27, Colby Sawyer, New London, NH

Elastin and Elastic Fiber Proteins

July 29-Aug 3, University of New England, ME

Fibronectin, Integrins, and Related Molecules

April 22-27, Lucca (Barga) Italy

Glycobiology

Mar 4-9, Four Points Sheraton, Ventura, CA

Matrix Metalloproteinases

Jun 3-8, Lucca (Barga) Italy

Small Integrin Binding Proteins

Aug 5-10, University of New England, ME

Don't miss this important and outstanding conference!



5th International Conference on Proteoglycans

Proteoglycans at the beginning of the 21st century
Hotel ClubMed Rio das Pedras-Mangaratiba
Rio de Janeiro-Brazil

September 16-20, 2007



Laboratório de Tecido Conjuntivo
Instituto de Bioquímica Médica - Programa de Glicobiologia e
Hospital Universitário - Universidade Federal do Rio de Janeiro

It is our great pleasure to extend you an invitation to participate in the 5th International Conference on Proteoglycans – "Proteoglycans at the beginning of the 21st century" (September 16 – 20, 2007), which will be held in Club Med Rio das Pedras-Mangaratiba, Rio de Janeiro. Mangaratiba at the Rio de Janeiro coast will provide us a relaxed atmosphere to talk about recent findings on proteoglycans. We are planning talks by investigators who have made important contributions for the understanding of molecular and cellular aspects of proteoglycans dynamics in physiological and pathological phenomena. Scientific sessions will cover diverse themes, including biosynthesis, structure, signaling, development, diseases, animal models and therapeutics. We will also have poster sections for all participants and organized informal speaker/student contacts when young investigators will have the opportunity to discuss their work with foreign scientists.

Mauro S.G. Pavão *Paulo A.S. Mourão*

Mauro S.G. Pavão, PhD and Paulo A.S. Mourão, PhD
Meeting Organizers

FOR MORE INFORMATION:

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Online registration is open now

on the conference website: www.bioqmed.ufrj.br/pgrio2007/index.htm

Job Position Openings

University of Washington - Postdoctoral Position

A postdoctoral position is available to study the role of osteopontin in atherosclerotic plaque development in a mouse model in Dr. Giachelli's laboratory at the University of Washington, Department of Bioengineering. Prior experience with small rodents handling is highly desirable (e.g., mice breeding and crossing, and adoptive transfer). Other desirable experience includes familiarity with techniques to analyze tissues, recombinant DNA methods, cell culture, and protein biochemistry. Qualifications comprise a Ph.D. and/or M.D. degree, a strong publication track record, and good communication/organizational and record keeping skills. Salary plus fringe benefits will be determined on the basis of experience in relevant research areas and reference letters. The University of Washington enjoys an interactive environment ideal for scientific discovery. Qualified candidates with interest in this opportunity should send a curriculum vitae and three letters of recommendation to Dr Cecilia Giachelli, PhD, University of Washington, Box 355061, Seattle, WA 98195, e-mail: ceci@u.washington.edu

University of Washington - Postdoctoral Position

A postdoctoral position is available to study regulation of vascular calcification in cell culture and mouse animal models in Dr. Giachelli's lab at the University of Washington. Prior experience with molecular biology, immunochemistry, cell culture, and mouse experiments are desirable. Qualifications comprise a Ph.D. and/or M.D. degree, a strong publication track record, and good communication/organizational and record keeping skills. Salary plus fringe benefits will be determined on the basis of experience in relevant research areas and reference letters. The University of Washington enjoys an interactive environment ideal for scientific discovery. Qualified candidates with interest in this opportunity should send a curriculum vitae and three letters of recommendation to Dr Cecilia Giachelli, PhD, University of Washington, Box 355061, Seattle, WA 98195, e-mail: ceci@u.washington.edu.

University of Miami School of Medicine- Postdoctoral Research Fellow

We have an immediate opening for a postdoctoral research fellow in the Cutaneous Biology Research Laboratory in the Department of Dermatology and Cutaneous Surgery at University of Miami. This is a NIH funded research position to study cellular and molecular biology of epithelial/endothelial basement membrane ECM in cutaneous wound healing and skin cancers. The study is involved in laminin-integrin signaling pathway. Self-motivated candidates with experience in cellular and molecular biology, biochemistry, genetics or animal model skills is desirable. Qualified candidates will have a solid track record of research and academic achievement including publications in internationally recognized, peer-reviewed journals. A PhD degree or equivalent is required. Written and oral communication skills also required. Please send curriculum vitae and the names of three references to jli@med.miami.edu. For more information, please contact: Jie Li, MD, PhD, Associate Professor, University of Miami School of Medicine, Department of Dermatology & Cutaneous Surgery, 1600 NW 10th Avenue, RMSB Building, Room #2049, Miami, Florida 33136. (t)305-243-3365, (f)305-243-6191, jli@med.miami.edu.

University of Minnesota Applied Matrix Biology in Vascular Tissue Engineering - Postdoctoral Position

A new NHLBI grant to develop a fibrin-based bioartificial artery includes postdoc funding to focus on cell/molecular biology aspects of tissue growth. Of immediate interest is investigating the roles of plasmin and MMPs in the fibroblast/SMC-mediated conversion of fibrin into ECM, with an emphasis on production of collagen and elastic fibers. There is flexibility in defining the research within the general sphere of understanding and promoting the conversion of fibrin into functional ECM. This person will interact with graduate students involved in bioreactors and functional testing of tissue constructs and benefit from lab staff for cell culture and supporting lab work. Opportunity exists for exposure to associated endothelialization studies and animal studies. For more information, see <http://www1.umn.edu/bme/people/tranquillo2.html>. The position is available starting in Spring 2007 at a competitive salary. Candidates must apply via <https://employment.umn.edu/#140234> with a statement about relevant training, a CV including at least three references, and a PDF of his/her most relevant publication. Questions can be directed to Prof. Bob Tranquillo: tranquillo@cems.umn.edu. University of Minnesota is an Equal Opportunity Educator and Employer

UT San Antonio - Post-Doctoral Fellowship/Instructor/Research Assistant Professor Positions

Research positions at the rank of post-doctoral fellow (GAHO—PD0125), instructor (GAHO—0600), and research assistant professor (GAHO—0601) are available to work on cutaneous biology and immunology at the Division of Dermatology, The University of Texas Health Science Center at San Antonio (UTHSCSA). The Division of Dermatology is in the midst of a major expansion and will soon relocate to a new state-of-the-art location under new leadership. The successful applicants will join a laboratory with an outstanding team of faculty that is solely focused on skin biology, extracellular matrix and immunology. The applicants should have a Ph.D. or M.D., be motivated, organized, and able to work independently. Knowledge of techniques in cell culture and molecular biology is required. Candidates with previous experimental experience in transgenic mice, gene array and polychromatic flow cytometry are preferred. Faculty positions at the ranks of instructor to research assistant professor can be offered to highly qualified applicants with proven track records for successful research. The positions offer outstanding facilities, competitive salary, and benefits. Candidates MUST INDICATE which position(s) they are applying for by referencing the position number located above in parentheses. All faculty and post-doctoral appointments are designated as security sensitive positions. The UTHSCSA is an Equal Employment Opportunity/Affirmative Action Employer. If you are interested in joining a highly talented research team situated in a unique location with a global vision, please email your letter of interest, curriculum vitae, and three recommendation letters to Lora Tumlinson, Division Administrator, Division of Dermatology, Department of Medicine, DermSA@Gmail.com.

Fun in Nashville: ASMB 2006

Participants Enjoy the Gala at the Country Music Hall of Fame



Funding Opportunities for the Matrix Biologist

There are several foundations that offer funding for biomedical research. Examine each site to identify the particular area of science each foundation funds. Some of the web sites listing funding foundations can be found at:

- <http://fconline.fdncenter.org/>
- <http://www.srainternational.org/newweb/grantsweb/index.cfm?GrantsWebID=106&TitleID=106&SubTitleID=1&GroupID=1&SubGroupID=1>
- http://dir.yahoo.com/Health/Medicine/Organizations/Research_Foundations/
- <http://www2.lib.udel.edu/subj/foce/resguide/found.htm>

A selection of current NIH funding opportunities that should be of interest to matrix biologists in diverse areas:

PAS-07-196, NINDS, 01/05/2007- 07/06/2007

Understanding and Preventing Brain Tumor Dispersal (R01)

PAS-06-201, NINDS, 05/02/2006 - 07/02/2007

Understanding and Preventing Brain Tumor Dispersal (R21)

PA-07-125, NIAMS, 01/05/2007 - 01/03/2008

Muscular Dystrophy: Pathogenesis and Therapies (R01)

PA-06-450, NIAMS, 06/09/2006 - 11/02/2007

Joint Degeneration: Mouse Models (R21)

PA-06-242, NIA, 05/02/2006 - 03/02/2009

Aging Musculoskeletal and Skin Extracellular Matrix (R21)

PA-07-012, NIDDK, 01/05/2007 - 07/06/2008

Animal Models of NIDDK Relevant Diseases (R01)

PA-06-407, NHLBI, 05/10/2006 - 07/02/2008

Directed Stem Cell Differentiation for Cell-Based Therapies for Heart, Lung, and Blood, and Aging Diseases (R21)

PA-07-165, NHLBI, 01/05/2007 -12/31/2009

Pathogenesis And Treatment Of Lymphedema And Lymphatic Diseases (R01)

PA-07-026, NIDDK, 01/02/2007 - 05/02/2009

Developmental Biology and Regeneration of the Liver (R01)

PAR-06-504, NIBIB, 08/20/2006 - 05/21/2009

Enabling Technologies for Tissue Engineering and Regenerative Medicine (R01)

Karl A. Piez (1924-2006) A Personal Tribute

Karl Piez was born in Needham, MA and served in the Army during World War II. He graduated from Yale University in 1947, received a Ph.D degree in Chemistry from Northwestern University in 1952, and joined NIDR (now NIDCR) shortly thereafter. He became chief of its Laboratory of Biochemistry in 1966. Karl retired from NIH in 1982 to become Chief Scientist and Director of Research at Collagen Corporation in Palo Alto, CA. Later on he was a founder and a member of the Board of Directors of FibroGen, Inc. a biotechnology company in South San Francisco, CA. In 1991, Karl returned to academia to become Professor of Biochemistry and Scholar-in-Residence at Jefferson University, School of Medicine. He retired in 1996.

During my first meeting with Karl in 1962, I was immediately struck by his enthusiasm for his work, his intelligence, candor, and sense of humor. Even though I was not particularly attracted to research on collagen at the time, I decided, on the spot, to work with him. Since, as an M.D., I had no previous experience in protein biochemistry, Karl carefully tutored me in the principles and practice of column chromatography, analytical ultracentrifugation, and amino acid analysis, pretty much the toolbox of collagen biochemists in those days. I then launched on an analysis of the chain composition of human skin collagen, which as Karl cleverly realized, allowed me to hold on to my clinical security blanket for a while longer. The results were pretty much the same as those previously published for rat collagen, but the paper was accepted by the JCI without revision – those were the days!

I remember the Piez lab at that time as a place of constant ferment, with exciting discussions among Karl, George Martin, and Ted Miller. Later, as we became more comfortable with the subject matter, Andy Kang, Bill Butler and I joined in. Two pressing questions in basic collagen chemistry were often debated. One related to the composition of collagen α chains. Karl favored a model in which the chains were generated by a continuous string of peptide bonds, whereas Paul Gallop, an accomplished organic chemist, was a prominent proponent of a model in which subunits were linked by ester bonds. The second question related to the chemical nature of the covalent inter-chain bonds that linked α chains to form β components, and that Karl suggested were related structurally and mechanistically to the intermolecular cross-links in collagen fibrils.

These discussions spurred me on to pursue experiments using CNBr to cleave purified $\alpha 1$ and $\alpha 2$ chains at methionyl bonds. Our rationale was that if repeating subunits existed in α chains, the pattern of CNBr-generated peptides should provide evidence for this claim. Furthermore, if we were lucky we might be able to isolate a cross-linked peptide from β_{12} components, and determine its structure. Karl and I discussed this approach at length. It was clear that he was not optimistic that it would succeed, but it was a mark of his superb mentorship that he was able to convey the problems that I might encounter without discouraging me. Karl's reservations were justified in that, initially, incomplete cleavage and poor separation of CNBr peptides made the interpretation of the results difficult. However, with the assistance of Andy Kang and Bill Butler, we were able to improve our chromatographic techniques and show that the CNBr fragmentation pattern was inconsistent with all of the subunit models under consideration.

These experiments provided strong evidence for non-repetitive sequences in both the $\alpha 1$ and $\alpha 2$ chains. Furthermore, with a stroke of good fortune, we found that a single inter-chain covalent bond existed in a β_{12} component, and was located near the N-termini of the two α chain precursors, conveniently close to the first methionyl residues in the chains. Then, using collagen from both control rats, and lathyratic rats in which lysyl oxidase and cross-linking were inhibited, we proceeded to show that the interchain cross-link in β_{12} resulted from the interaction of a lysyl-derived aldehyde near the NH_2 -terminus on one chain with a similar aldehyde on an adjacent chain to form an aldol condensation product. Later on, Karl's prediction that the mechanisms of formation of intramolecular and intermolecular cross-links were related was proven to be correct by the work of several other laboratories.

As exciting as these studies were for Andy Kang, Bill Butler, and me, Karl's lab was involved at the same time in equally significant studies that established the multiplicity of genetically distinct collagen types. Ted Miller showed, on the basis of analyses of CNBr-produced peptides, that cartilage contained a second structurally distinct protein, which was termed type II collagen, and shortly thereafter type III collagen was discovered in skin using similar techniques.

The field of matrix biology has made almost unimagined progress, as have other areas in biology, during the past 40 years. Nevertheless, those of us who work in areas of biology, medicine, and bioengineering, in which the biochemical and biophysical properties of collagen play an important role, owe a huge debt of gratitude to Karl Piez. For those of us who knew Karl personally, that debt is compounded by our appreciation of his human qualities: intelligence and intellectual rigor, tempered by kindness, generosity, and a fine sense of humor. In addition, for me, Karl's influence led to my career in matrix biology.

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